CONTRACTOR PERSPECTIVE

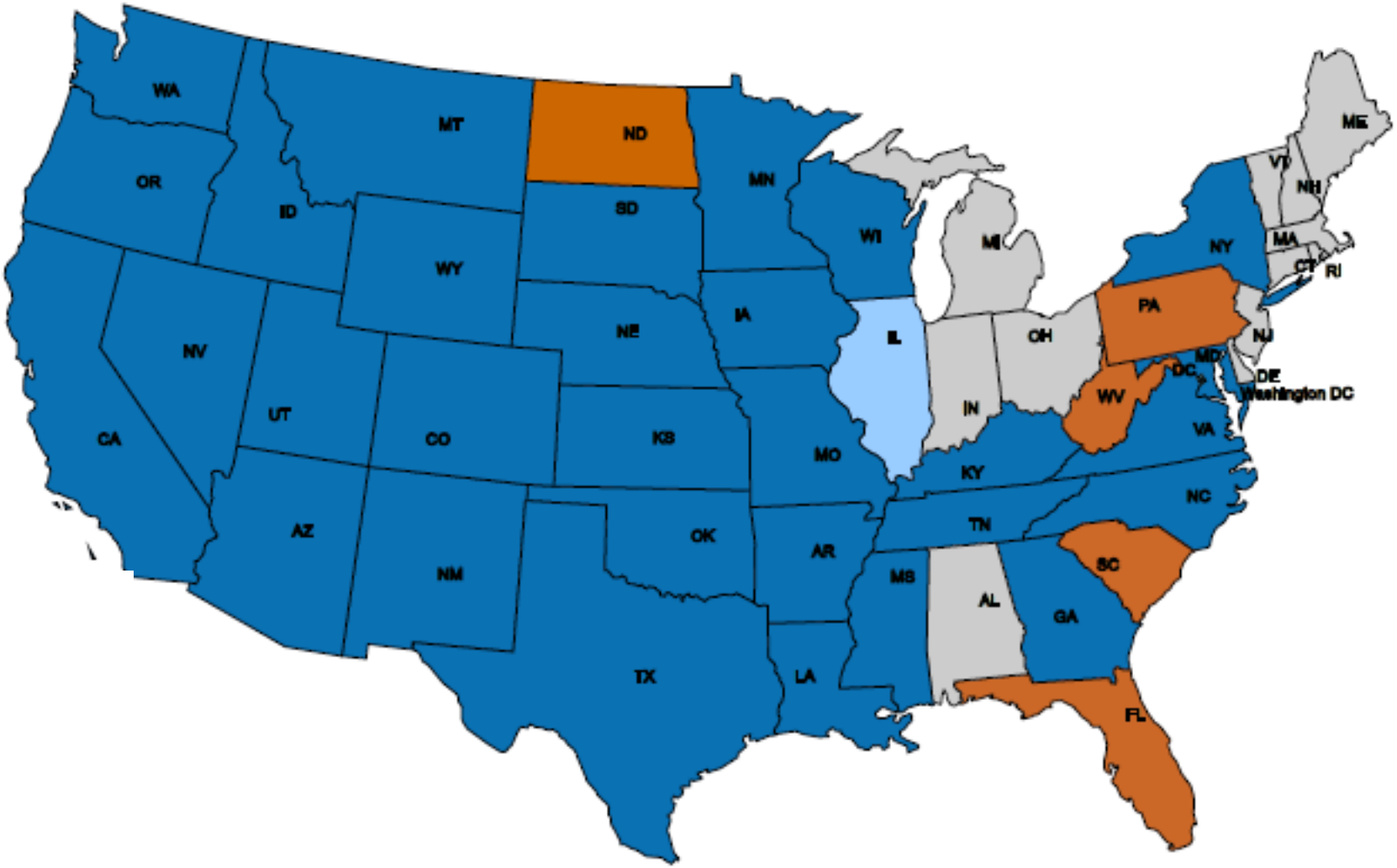
WESTERN
BRIDGE PRESERVATION PARTNERSHIP

THANK YOU!

Kurt Clink
President | CEO

I am here to...

Honesty in our words
Excellence in our craft
Leadership from our people
Passion for a positive result.



TRUESDELL CORPORATION

Relevance and Focus

Repair, Restoration, Strengthening, Protection & Maintenance (concrete)

Bridge Superstructure (decks, rails, girders, etc.)

- Repair, retrofit, strengthening
- Bridge Deck Overlays
  - Healer/Sealer
  - Epoxy/MLO
  - Polyester Concrete

Bridge Substructure (foundations, piers, etc.)

- Repair, retrofit, strengthening
- Bearings

Owner - Contractor Relationships

- Basis is a Contract
- Starts with a Bid
- It is about risk transfer/ownership
- Risk = Cost

How can you design and bid your projects to reduce the cost to the owner?

Owner - Contractor Relationships

Delivery Method

traditional

- Design - Bid – Build (contractual)

alternative

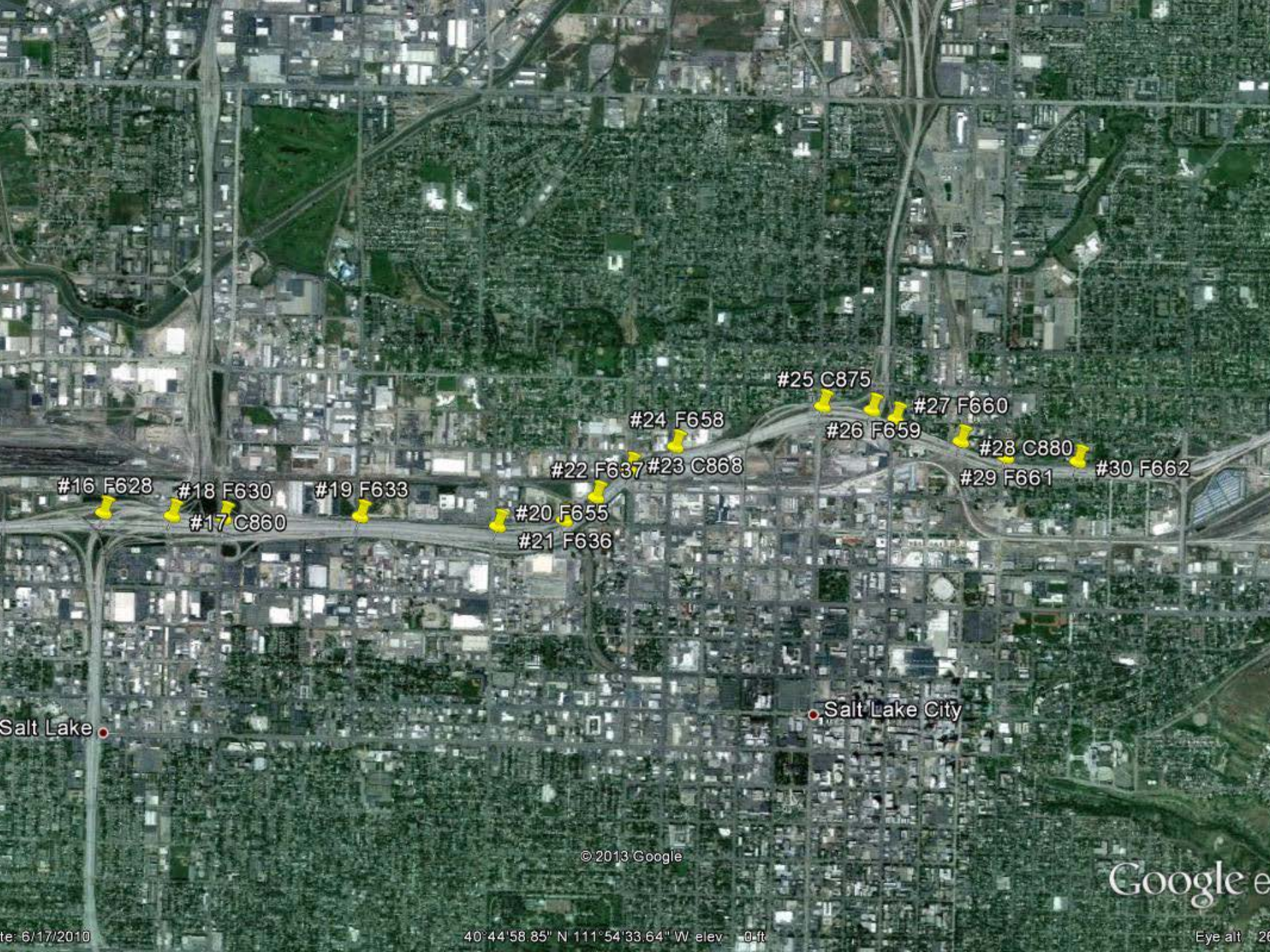
- Design/Build (relational)
- Job Order Contracts (JOC)

Key is to match the delivery method with the job.

Owner - Contractor Relationships
Packaging/Bundling

- **Overall project size**
  - bigger is better
- **Geography/footprint of locations**
  - smaller is better (clusters)
- **Scope(s) of work**
  - Single or few vs many
  - “Primary” is primary consideration
- **Working hours**
  - Days or nights, weekend or weekdays

Key is to PLAN the projects intentionally.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Owner - Contractor Relationships
Project Duration (scheduling)

- **Working Days vs Completion date**
  - some flexibility is better
  - float = flexibility = attractiveness
- **Short costs more**
  - not due to acceleration
  - due to “fit”
- **Incentives work**
  - A+B not so much
  - Completion date OR work days

Owner - Contractor Relationships
Closure “work” Schedules

- **Cost AND Safety factors**
- **Costs not always clear**

  some flexibility is better

  float = flexibility = attractiveness

Key is to consider ALL costs, over time.

Closure “work” Schedules EXAMPLE

- **Proposed closure is 11pm – 5am**

  6 hours

  .5 hour traffic setup
  1 hour work
  4 hour cure
  .5 hour traffic take down

- **Proposed closure is 10pm – 5am**

  7 hours

  .5 hour traffic setup
  2 hour work
  4 hour cure
  .5 hour traffic take down

Closure “work” Schedules EXAMPLE

- **6 hours = 1 hour to work**
  - 8 hours of pay for union crew & equip
  - 1 traffic closure
  - 5,000 SF “treat/overlay”
  - $10,000 cost = $2/SF (labor & equip)

- **7 hours = 2 hours to work**
  - 8 hours of pay for union crew & equip
  - 1 traffic closure
  - 10,000 SF “treat/overlay”
  - $10,000 cost = $1/SF (labor & equip)

A small change in closure hours can *double* the cost of production!

Closure “work” Schedules EXAMPLE

- **6 hours = 1 hour to work**
  - 8 hours of pay for union crew & equip
  - 1 traffic closure
  - 5,000 SF “treat/overlay”
  - 50ksf total = **10 days**

- **7 hours = 2 hours to work**
  - 8 hours of pay for union crew & equip
  - 1 traffic closure
  - 10,000 SF “treat/overlay”
  - 50ksf total = **5 days**

A small change in closure hours can *double* the TIME for production!

Owner - Contractor Relationships
Closure “work” Schedules

- Cost AND Safety factors
- Costs not always clear

  some flexibility is better

  float = flexibility = attractiveness
- Another hour or two can cut costs by 50%
- Another hour or two can cut days by 50%

What is truly safer and more cost effective?

Owner - Contractor Relationships

Bid Schedule (Items)

- **Efficient number**
  - +/- 20-30 BI's work well for projects $100k-$5MM (more for larger)
  - too few = "incidental" or weighted avg's
  - too many = more cost
    - loss of synergy
    - administrative costs
    - Harder to lower bid on bid day

Key is to match the complexity of the BID with the complexity of the PROJECT.

Owner - Contractor Relationships

Contingency Bid Items

- **Establish a Unit Price (risky)**
  - unknown quantity drives prices up
  - unknown location(s) drives prices up
- **“Allowance” Items (fair)**
  - Force Account
  - Lump sum place holders

Don’t let an ancillary item dictate who is awarded.

Owner - Contractor Relationships
Costly Contract/Spec Req’ts

- **Risky**
  - Risk = Cost
- **Unnecessary**
  - Obsolete
  - Self explanatory
  - Disguised as regulatory
- **Inappropriate**
  - Unit of measure
  - Order of magnitude

Avoid letting the biggest risk taker win the job.

Costly Contract/Spec Req'ts
EXAMPLES of RISKY

- **Items with the wrong quantity**
  - "Estimated" with no verification (or logic)
  - Unsound/deck spalls
- **Items deemed "incidental" to another**
  - Unsound/deck spalls
  - Stripe / stripe removal
  - Milling or grinding
- **Lump Sum items with no clear specification**
  - Environmental
  - Public notification

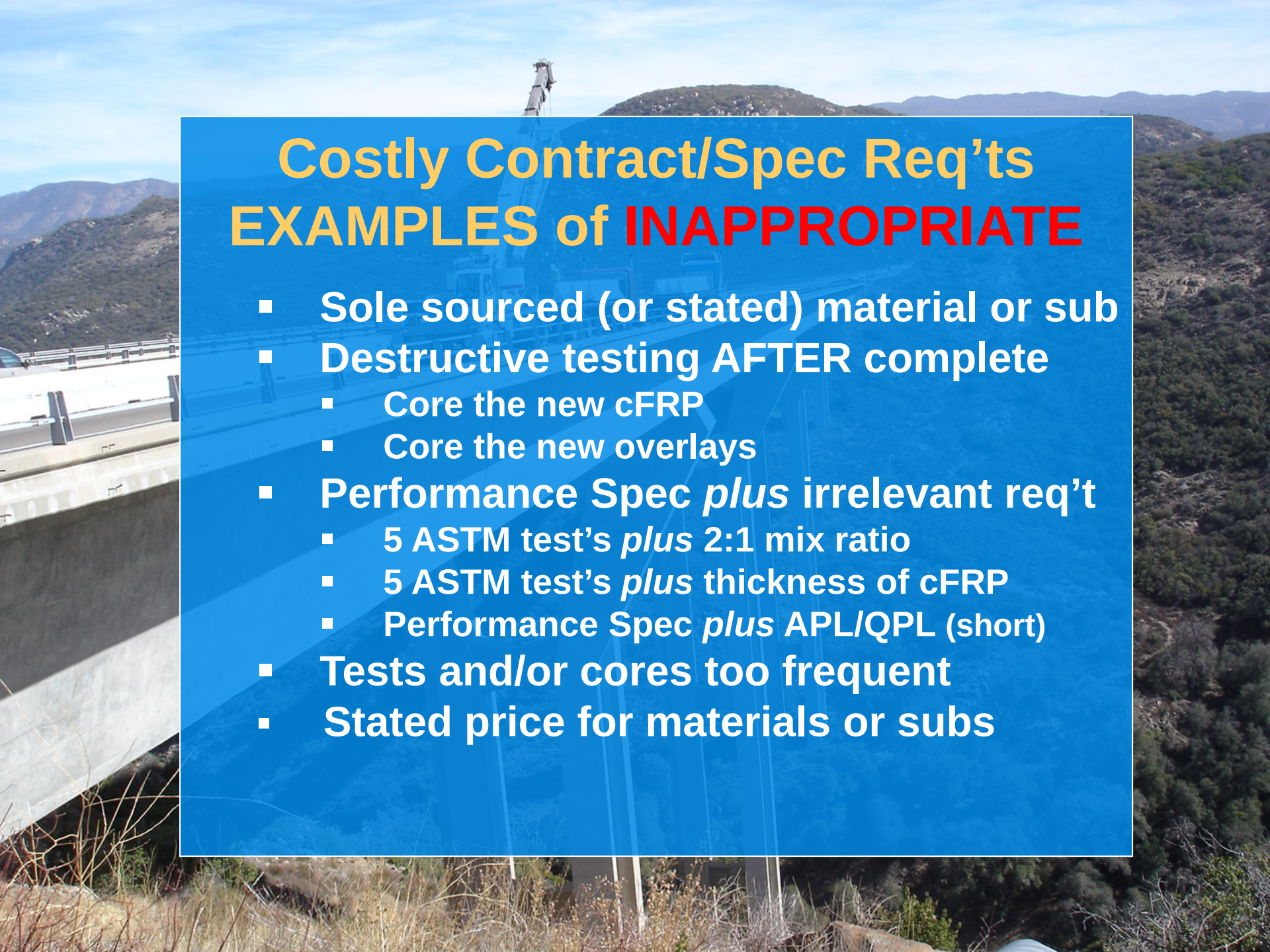
Costly Contract/Spec Req'ts
EXAMPLES of UNNECESSARY

- Excessive cores
- Excessive testing
- Plotters on every job (provided to DOT)
- Field office for 1-2 week job
- Air & noise monitoring at multiple locations every night
- Test slabs (not in work area)
- Primer before the MLO
- Specifying means and methods (HFST)

Don't fall for "We'll make the Contractor pay for it".

Costly Contract/Spec Req'ts
EXAMPLES of INAPPROPRIATE

- **Items with the wrong UOM**
  - Make UOM appropriate to Bid item (2 dimensional versus 3 dimensional)
    - SF or SY when CF or CY is needed
      - Furnish Polyester Concrete
      - Unsound concrete
    - CF or CY when SF or SY is needed
      - Prep & Place Polyester Concrete
    - SF when GAL is needed
      - Furnish Healer/sealer (methacrylate etc.)
- **Lump Sum when Unit Price is better**
  - Repair, or replace "bad x"
- **Unit Price when Lump Sum is better**
  - Traffic Control (sometimes)



Costly Contract/Spec Req'ts
EXAMPLES of INAPPROPRIATE

- Sole sourced (or stated) material or sub
- Destructive testing AFTER complete
  - Core the new cFRP
  - Core the new overlays
- Performance Spec *plus* irrelevant req't
  - 5 ASTM test's *plus* 2:1 mix ratio
  - 5 ASTM test's *plus* thickness of cFRP
  - Performance Spec *plus* APL/QPL (short)
- Tests and/or cores too frequent
- Stated price for materials or subs

Costly Contract/Spec Req'ts
EXAMPLES of INAPPROPRIATE

Specifying means and methods

- **Only certain *proprietary* equipment allowed "truck mounted" (HFST application)**
- **Both coats in same shift (MLO)**
- **4 hour cure (i.l.o. rebound** [ex: Schmidt] **hammer)**
- **Spray methacrylate**
- **One hand tied behind your back**

Use performance standards when reliable, add testing and acceptability when worried, add means and methods when there is *only one way to do it.*

Add minimum Contractor Qualifications whenever appropriate.

Administrative Best Practices

- Plan holders list
  - Posted
  - Bidders & non-bidders
- Q&A (Bidder Inquiry) posted
- Monitor/update MBE program goals
- Be consistent with B.I. names
  - Searchable
- Electronic Bidding (not paper)
  - Certainly not BOTH (WY)

THANK YOU!

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President | CEO

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